

## UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of

Atty Dkt. 2111-15

SEIDEL

C# M#

Group Art Unit: 3743

Serial No. 09/600,260

Examiner: C. Atkinson

Filed: July 13, 2000

Date: October 23, 2002

Title: FLAT PLATE HEAT EXCHANGER AND  
FLAT PLATE THEREFORAssistant Commissioner for Patents  
Washington, DC 20231RECEIVED  
OCT 29 2002  
TECHNOLOGY CENTER 3600

Sir:

**RESPONSE**

This is a response/amendment/letter in the above-identified application and includes an attachment which is hereby incorporated by reference and the signature below serves as the signature to the attachment in the absence of any other signature thereon.

**Fees are attached as calculated below:**

Total effective claims after amendment 0 minus highest number  
previously paid for 20 (at least 20) = 0 x \$ 18.00 \$ 0.00

Independent claims after amendment 0 minus highest number  
previously paid for 3 (at least 3) = 0 x \$ 84.00 \$ 0.00

If proper multiple dependent claims now added for first time, add \$280.00 (ignore improper) \$ 0.00

Petition is hereby made to extend the current due date so as to cover the filing date of this  
paper and attachment(s) (\$110.00/1 month; \$400.00/2 months; \$920.00/3 months) \$ 920.00

Terminal disclaimer enclosed, add \$ 110.00 \$ 0.00

☐ First/second submission after Final Rejection pursuant to 37 CFR 1.129(a) (\$740.00) \$ 0.00  
☐ Please enter the previously unentered, filed  
☐ Submission attached

**Subtotal \$ 920.00**

If "small entity," then enter half (1/2) of subtotal and subtract -\$ 460.00  
☐ Applicant claims "small entity" status. ☐ Statement filed herewith

Rule 56 Information Disclosure Statement Filing Fee (\$180.00) \$ 0.00

Assignment Recording Fee (\$40.00) \$ 0.00

Other: 0.00

**TOTAL FEE ENCLOSED \$ 460.00**

The Commissioner is hereby authorized to charge any deficiency, or credit any overpayment, in the fee(s) filed, or asserted to be filed, or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Account No. 14-1140. A duplicate copy of this sheet is attached.

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NIXON & VANDERHYE P.C.  
By Atty: Larry S. Nixon, Reg. No. 25,640

Signature: Larry S. Nixon



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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10-30-02  
#7

In re Patent Application of

SEIDEL

Atty. Ref.: 2111-15

Serial No. 09/600,260

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Filed: July 13, 2000

Examiner: C. Atkinson

For: FLAT PLATE HEAT EXCHANGER AND  
FLAT PLATE THEREFOR

\* \* \* \* \*

October 23, 2002

Assistant Commissioner for Patents  
Washington, DC 20231

Sir:

RESPONSE

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In response to the outstanding Official Action, mailed April 24, 2002,  
reconsideration of this application is requested in view of the following remarks.

Of claims 1-20 in the application, claims 4-9 and 14-19 have been withdrawn from  
consideration as per Examiner's comments that they are drawn to a non-elected  
patentably distinct species, pursuant to 37 C.F.R. 1.142(b).

Claims 1-3, 10-13 and 20 stand rejected under 35 U.S.C. §102(b) as being  
anticipated by U.S. Patent No. 4,804,040. Applicant respectfully submits that the  
rejected claims are neither anticipated nor rendered obvious by U.S. Patent No. 4,804,040  
(the "cited patent").

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The cited patent describes a plate heat exchanger having a plurality of heat exchange plates which are arranged between a base plate and a pressure plate, and which are supported by a lower carrying bar. The lower carrying bar and an upper guide bar extend through open-form recesses formed in the respective lower and upper portions of the plates.

The upper edge recess only, of each heat exchange plate is provided with one or two transverse lugs which are coplanar with the remainder of the plate, and which extend partially across the recess so as to form a partial constriction thereof, thereby to assist in retaining the heat exchange plate in engagement with the guide bar. The lugs are described as being flexible enough to be bent aside, transversely to the plane of the plate, thereby to permit insertion of the guide bar through the constriction and into the recess, and to spring back after the bar has been inserted.

Among disadvantages inherent in the above-described heat exchange plates of the cited patent are the fact that it is required to twist each plate so as to force it onto the guide bar with a force that is sufficient to bend the lugs. This not only requires the use of a fair degree of force, but, in the event that too much force is exerted, the lugs may be bent too much so that they do not "spring back" into position.

In sharp contrast to the teachings of the cited patent, claim 11 recites a flat plate member, and claim 1 recites a flat plate heat exchanger which includes a plurality of slate plate members, wherein each flat plate member includes "*at least one support*

*engagement portion for permitting snap coupling between said plate member and said elongate support apparatus."* Of particular significance is the inclusion in the "*at least one support engagement portion*" of "*at least one resilient member arranged for flexing in a direction which is both lateral to the direction of coupling and substantially parallel to the plane of said plate member*" (emphasis added).

It will thus be appreciated that the direction of flexing is in-plane vis-à-vis the plane of the plate member, rather than **perpendicular** to plane of the plate, as taught in the cited patent. Moreover, a particular advantage of this inventive feature is the fact that the plate can be "snap-coupled" to the support member, obviating the need to twist maneuver the plate onto the support member, as required inherently in the cited patent.

It is thus respectfully submitted, that the cited patent does not anticipate either claim 1 or 11 of the present application , in view of the absence of the claimed "*at least one resilient member arranged for flexing... in a direction parallel to the plane of said plate member.*" Moreover, the cited patent neither discloses nor indicates in any way that any variation of the lugs disclosed therein would be suitable, nor would it in fact be possibly to employ the lugs disclosed so as to function in a manner similar to that of the resilient members of the present invention. Accordingly, claims 1 and 11 are further deemed to be unobvious in view of the cited patent, and thus allowable thereover.

Claims 2, 3 and 10 depend, either directly or ultimately, from claim 1 and are thus deemed to be allowable at least because they depend from an allowable base claim.

Claim 10 is further deemed to be patentable over the cited art as reciting the additional feature of a single support engagement portion in each of the generally parallel edge portions of the recited flat plate. The cited US patent specifically states a U-shaped recess as being sufficient "since the heat exchange plate is supported by the carrying bar" (column 3, lines 5-7).

The additional feature recited by claim 10, namely, the provision of a support engagement portion, which inherently includes the recited resilient member, on both edges of the plate, is a feature which is thus not only absent from the cited patent, but which is also deemed thereby to be unnecessary.

It is thus respectfully submitted that claim 10 is both novel and unobvious over the cited patent, and is thus allowable.

Claims 12, 13 and 20 depend, either directly or ultimately, from claim 11 and are thus deemed to be patentable as being dependent from an allowable claim.

Claim 20 is further deemed to be allowable for the reason mentioned above in conjunction with claim 11, and which is not detailed again herein, for reasons of conciseness.

In summary, claims 1-3, 10-13 and 20 are deemed to be patentable over the cited art. Furthermore, claims 4-9, and 14-19, withdrawn from consideration, are respectfully

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deemed also to be allowable, as being dependent, either directly or ultimately from allowable generic claims.

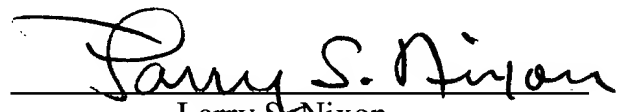
The prior art made of record but not relied upon has been reviewed, and is not considered to prejudice patentability of the claimed invention.

In view of the foregoing amendments and comments, the application is believed to be in condition for allowance. Favorable reconsideration and allowance of the application are respectfully requested.

Respectfully submitted,

**NIXON & VANDERHYE P.C.**

By: \_\_\_\_\_

  
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